Evaluating Effective Factors on Executive of Digital Integrate System in Isfahan chamber of commerce Companies

Rasool Shafieyoun, Ph.D.
Assistant professor, Management Department, Islamic Azad University, Branch of Mobarakeh, Iran

Faridddedin Allammeh Haery, Ph.D.
Assistant professor, Management Department, Islamic Azad University, Branch of Mobarakeh, Iran

Mohammad Asemi
Corresponding Author
M.S.C., Business management, Islamic Azad University, Branch of Mobarakheh, Iran

DOI: 10.6007/IJARBSS/v4-i5/854 URL: http://dx.doi.org/10.6007/IJARBSS/v4-i5/854

Abstract

Emergence and development of E-commerce through internet applications in new era has made a wide change in individual, organisational, national and global life. Today, companies' integrated information systems move towards digital data. This data encompass all of files, records, emails and web pages. The study objective is finding and presenting facts and limits of execution of integrated digital systems through identifying affecting challenges of effective execution on it and factors preventing execution of integrated digital systems in manufacturing companies in Isfahan chamber of commerce. The methodology of this study is descriptive field research. The study sample consists of 95 manufacturing companies (including 30 companies that are not willing to use integrated digital system and 65 companies that use this system) which are member of Isfahan chamber of commerce.

According to this study results, it seems that manufacturing companies which are member of chamber of commerce have been accompanied with the wave of E-commerce very slowly. It is obvious that expertise and technological limitations related to information technology and operational and strategic indicators are among violating factors of organization, are an abstract on the path of effective execution of integrated digital system and in case of correct planning, customers and strategic/operational indicators are most beneficial factors of usage of this kind of system.

Keywords: E-commerce, integrated information systems, digital nervous systems, reengineering, information technology, enterprise resource planning.
1. Introduction

Today organisations' integrated information systems move toward digital data. These data encompass any file, record, email and webpage. Each internal process should be digital and integrated with any other process. Also, all of transactions with partners and customers should be digital. In the digital world, all of information should be digital which this change requires tools and large amount of cost and time (Luv, 1998).

When a change occurs in market, some firms adapt that change, buy needed tool with lower cost which caused large turnover for company, consider some people for learning essential issues and in proper time make necessary change in company. But, some other companies are only observers of this change which then they will have to accept this change.

The most important part of implementation is business processes reengineering (BPR) in enterprise resource planning (ERP) or business processes improvement (BPI) in in integrated management information systems. Without doubt, implementation of integrated softwares in organization which have no optimized processes can lead to inefficiency, growth of irregularity and low productivity.

Companies also attempts capture customers' satisfaction by considering their expectations and provide them with timeliness and effective supportive services continuously. The most important tool for providing support services is having proper communication facilities which this tool makes connection with support services through telephone, fax, email, online conversation and telecommunications in order to connect to the customer's server (Behco, 2012).

Therefore, research in line with E-commerce and integrated electronic systems besides has a specific importance, its lunch in country and all of organisations seems to be necessary.

2- Theoretical basics and study background

E-commerce is based on electronic data process and transaction including text, voice and image. It also involves different activities such as electronic exchange of goods and services, instant delivery of digital items and electronic transformation (e-commerce law, 2004). E-commerce applications developed for the first time in the 1970s with the invention of electronic cash transaction in which cash transferred in an electronic way. With becoming internet more commercial in the early 1990s, the term E-commerce was invented and its applications spread rapidly. From 1995 users witnessed development of innovative applications which were in place in a range from interactive ads to experiences in virtual reality.

In recent years E-commerce has surprisingly progressed and people tendency to use internet has increased so that a statistical study by Royal Pingwam research institute in 2011 implies that more than 2 million people in all around the world and near 60% of Iranians use internet. In E-commerce applications, companies need proper information, infrastructures and services in the areas of individuals, public policies, technical standards, business partners and supportive services. Competitive environment in Iran in recent years has tremendously changed. Breaking down of traditional geostrategic balances, elimination of obstacles of economic activities and movement of individuals and also globalization of economic activities are only a number of forces that result in continue of changing this competitive environment. Therefore, trading
organisations have made to seek different ways in order to achieve competitive advantage in a dynamic and progressive environment. A number of studies carried out in order to analyse benefits of new methods of doing business in E-commerce environment.

We can classify these studies into four groups: 1) studies which analysed procedures used by organisations for execution of E-commerce, 2) studies which analysed benefits of utilizing of E-commerce for organisations, 3) studies that investigated importance of framework of environment for adapting and accepting of E-commerce and 4) studies assessed importance of strategic techniques in successful execution of E-commerce.

**Integrated information systems in Iran**

Continual years four below sets have formed overall organisations and institutes information systems in Iran:

1. Methods section: including overall schematic of organization activity and set of operation turnover charts.
2. Accounts sector: including principles and basics of accounts design, list of accounts, accounts definitions and the method of recording of operation accounting.
4. Organization: including organisational chart and organisational job description of personnel.

In the late 1350s (1970s) organisations and institutes interests towards the importance of usage of computer to information process increased. Historical assessment of information systems in Iran in recent decades shows that integrated information systems like other issues influenced by political situation and factors like that and because of instability of country's political and economic situation, sanctions imposed by well-known countries in the field of information technology, excess intervention of government in economy, monopoly of most of goods and services, inefficiency of finance, tax and investment laws and especially investors tendency to quick turnover has not expanded and not developed and has not achieved its real position (Ganascaran et al., 2002).

Rich and Nilsson (2003) in their study entitled "Future vision of organization in information technology position" suggest that one of challenges before existing organisations is strategic alignment of IT (information technology) with business. Taheri (2012) suggests that only a few number of companies in Iran have adequate business information systems and the others don't have proper information systems which some of them even don't have traditional information system and suffer lack of control and planning systems. The important point which should be considered by companies before buying this software is to be sure about full cover of main process and organization as whole, possibility of its customization or in other words, software adaptation with organization activities and more important, preparation to move from rather long time and difficult period of system establishment and installation.

Valizadeh and Maleki Rad (2012) suggests that achieving to accurate and in time information and also the necessity of existing of a cost based control caused complex logistic functions are
identified in managerial groups and structural logistics in integrated organisations as a accepted model is introduced.

3. E-commerce applications and its results

E-commerce has significantly changed manufacturing organisations and made manufacturing systems changed from mass production to demand based manufacturing systems which are customized nad just in time as possible. Strategic flexibility enables an organization to provide customers with customized products while keeps competitive advantages of mass production (Chang et al., 2002). Internet as a force can improve supply chain management, turn over and reduce costs for commercial processes in industries and nations (lancuni et al. 2003). E-commerce enables manufacturers to achieve more opportunities for sales and distribute product directly to the final user (Ganascaran et al., 2002). E-commerce can improve flow of information. Also, in collecting customers' aptitude competitors and potential markets are useful (Robert and Maki, 1998). E-commerce increase the ability of organization to understand and reaction to market needs through collecting and dissemination market information across the organization. With this information organization can assessment and simulate market demand accurately and also seek new markets (change, 2002).

Electronic environment related to E-commerce has the potential of increasing the speed of service providing system (Engai and watt, 2002), transactions (Strader and Shaw, 1997) and communications (Willson, 2002). E-commerce enables organisations to reduce preparation cycles and material, reduce product development cycles and accelerate the ratio of time to market through collaborative engineering and process and production designing. This surprisingly reduces buying time, production and circulation (Ganascaran et al., 2002). E-commerce allows organisations to respond to customers' needs quickly which can be done through reduction in to market time, time of manufacturing, time of transformation and time to service (Chelsea, 2003).

E-commerce has plenty benefits for organisations including cost reduction and customer service improvement (Dicanoy, 1998). Costs involve transactions costs (Chang et al., 2002), operational (Willson, 2002), distribution (Ganascaran et al., 2002), relation (Ganascaran et al., 2002), purchase (Lancuni, 2003), advertising (nas, 1998), administrative (Willson and Abel, 2002) and management (Mariotti and Sgoobi, 2001).

Challenges related to effective execution of integrated management systems

Generally, issues before integration of enterprise resource planning and E-commerce are as follows:
1. Wrong understanding, 2. Information island, 3. Heterogeneous environment, 4. Network security
The restrictions of enterprise resource planning implementation are variables that are as follows:
Requirements of integrated management systems implementation

Requirements of integrated management systems implementation are as follows:
1. Technical requirements, educational requirements, 3. Systematic requirements, 4. Legal and execution requirements, 5. Cultural requirements

Items below are among methods of integrated management systems implementation:
1. Big bang method, 2. Selective or insular method, 3. Main process method

Since global and multinational companies have utilized integrated management systems in order to improve operational yield, strategy effectiveness and customer orientation and benefited from them. Companies in developing countries also can benefit from these experiences very much and attempt to apply e-commerce techniques in their trading and business cultures. Thus, this paper investigates facts and restrictions of digital integrated systems in manufacturing companies which are member of Isfahan chamber of commerce.

4. Methodology
4.1. Methodology

This study is applicable from the purpose of view and is descriptive-survey of field study branch from the methodology point of view. This study was carried out in manufacturing companies which are member of Isfahan chamber of commerce with the central idea of investigating facts and restrictions of execution of digital integrated systems from February, 2013 to July, 2013. In this study, statistical sample consisted of 480 companies which are member of Isfahan chamber of commerce. The sampling method in this study is Stratified sampling. The sample size is 100 companies but from 100 distributed questionnaires 98 were back that three of them were not suitable for analysis.

In this study, the literature was collected by library method and document review. A standard questionnaire adopted from Shafieioon (2010) work was used as measuring tool was used to collect data. This questionnaire was adjusted in a five point likert. In fact, this study is based on participants' opinion polling and uses a tool which its structure consisted of vast review of literature and feedbacks from participants in this opinion polling. Similar tools were used in prior research (Yasin, 2006). The questionnaire validity were measured by a group of participants and academic experts. The questionnaire consisted of 19 questions including 3 open question, 5 question from classification criteria and 11 five point questions. In current study, calculated Cronbach's alpha is 0.94 which acknowledged questionnaire reliability.
2-4- Research question

2-4-1- main question

What are facts and restrictions of execution of digital integrated system in manufacturing companies which are the member of Isfahan chamber of commerce?

2-4-2- secondary questions

1. What are the challenges of effective execution of integrated digital system?
2. What are required corrective actions for execution and acceleration of integrated digital systems?
3. What are the factors that prevent execution of integrated digital system?
4. What are applications and reasons of utilization of integrated digital systems?
5. How does planning and right allocating of resource for execution of integrated digital system happen?

3-4- Data analysis method

In this study for analysis of data collected descriptive statistics (Frequency, Measures of central tendency, dispersion and mean) was used to describe phenomenon and prescriptive statistics including one sample t-test and independent sample t-test were used to analyse hypothesis. Furthermore, Friedman test was used to rank prioritize indices and SPSS, version 19 was used to statistical analysis.

4- Results

Descriptive analysis was carried out on 30 companies which are not willing to use integrated digital system and also 65 companies that use integrated digital system. Results show that among companies that are not willing to use this system, 60% have average technology and 40% have low technology in the industry that company operates so that 43.3% have average technology, 40% high technology and 16.7% have low technology in organization.

According to results demonstrated in table 1. We can say operation related issues and customer related issues indicators have more than average, supplier related issues, technology and personnel related issues indicators have less than average and financial issues and high price of technology has average impact on decision making about not executing integrated digital system in organization. In factors ranking we can say significant level of Friedman test is less than 5% which show that impact of all factors in decision making about not executing integrated digital system in organization is not similar and there is a significant difference between indicators. Ranks means for study measures suggest that "customer related issues" had the biggest rank mean, therefore it has most impact. After this indicator, "operation related issues" is on second place. Finally, technology related issues has the least impact.
Table 1. Statistical criteria of effective factors in decision making about not executing integrated digital system in organization

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Average Rating Friedman</th>
<th>Friedman statistic</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Issues</td>
<td>3.61</td>
<td>0.82</td>
<td>5.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Issues</td>
<td>3.14</td>
<td>0.54</td>
<td>5.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Issues</td>
<td>3.0</td>
<td>0.98</td>
<td>4.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The high price of technology</td>
<td>3.03</td>
<td>0.96</td>
<td>4.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>offer residents Issues</td>
<td>2.5</td>
<td>0.76</td>
<td>3.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel Issues</td>
<td>2.72</td>
<td>0.70</td>
<td>2.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Issues</td>
<td>2.3</td>
<td>0.68</td>
<td>2.62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In descriptive analysis of companies which use integrated digital system we can say 56.9% have average technology, 40% have low technology and 3.1% have high technology in industry that organization operates so that 40% have average technology, 44.6% have high technology and 15.4% have low technology. Along with this, 16.9% currently use integrated system.32.3% of companies that is the largest part of statistical sample in one or two years and 6.2% of companies that is the smallest part in less than six months are about to use integrated digital systems. Also 40% (ie. biggest part) one or two years and 6.2% (ie. smallest part) six months to one year and similarly 3 to 5 years and more than 5 years use integrated digital system. In description of the time that organization spend in using integrated digital system in trading we can say that the biggest part of sample that is 33.8% one to two years and the smallest part means 3.1% less than three months spend time in trading in stage of using integrated digital system.

According to the results demonstrated in table 2 it can be said that factors that organization considers during planning process is more than average and the Friedman mean suggest that the most important set of factors during the planning process is considered by organization which includes strategic, operational, personnel, technology, legal and financial, competitors and supplier measures.

The experience of using integrated digital systems in organization is considered more than average during the planning process and the Friedman mean suggest that this measure is in the second place of importance. The set of factors is considered by organization during the planning process which in suggesting this system to similar organizations in industry we can say that suggested method that change or define each aspect of a trade again is less than average and final method (step by step) is more than average.

In descriptive analysis of profitability of using integrated digital system, strategic, operational, suppliers and personnel measures were more than average profitable and customer measure was less than average profitable in using integrated digital system. In sum, factors in using integrated digital system have been more than average profitable.
Issues related to suppliers, issues related to technology and issues related to personnel measures had less than average impact and financial issues and high price of technology had average impact on decision making based on not execution of integrated digital system in organization.

In descriptive analysis of reasons of using integrated digital system in organization, items such as reduction of costs, improvement of speed and ease of doing transactions and achieving new markets and customers were more than average and items such as response to pressure and emphasis of customers, response to competition and response to pressure and emphasis of suppliers were less than average which are among reasons of using integrated digital system in organization.

In descriptive analysis of role of independent tasks in planning of using integrated digital system in organization, items such as sales/marketing department, suppliers and purchase department had a role of more than average in planning of integrated digital system and items such as level of executive management and external consultants had a role of less than average in that planning.

In descriptive analysis of corrective actions of organisation in using integrated digital system, items such as matrix teams and criteria based comparison were more than average and items such as just planning by senior management, trade process reengineering and tool of project management were less than average which are among corrective actions in using integrated digital systems.

In descriptive analysis of necessity of reform during preparation of organization for using integrated digital system, issues related to operation, suppliers, legal and strategic measures were necessary more than average, customers measure was necessary less than average and personnel and technology measures were average necessary during preparation of organization for using integrated digital system. Totally, reforming items were necessary more than average.

In descriptive analysis of factors that disrupted or prevented execution of integrated digital system, strategic/operational, personnel and customers measures were more than average and suppliers and technology measures were average in preventing of execution of integrated digital system in organization. Totally, disruptive or preventing factors of execution of using of integrated digital system were more than average.

In descriptive analysis the extent of agreement with trading methods it can be said methods such as ”method of trading through integrated digital system used in our organization was either strategically secure and proper operationally” and ”method of trading through integrated digital system used in our organization was strategically secure but improper operationally" are more than average and methods such as "method of trading through integrated digital system used in our organization was either strategically insecure but proper operationally" and "method of trading through integrated digital system used in our organization was either strategically insecure and improper operationally" are less than average. Generally, the extent of agreement with trading is average.
Table 2. Statistical criteria of effective factors in decision making about execution of integrated digital system

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Average</th>
<th>Standard deviation</th>
<th>Average Rating Friedman</th>
<th>Fried man statistic</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>The factors that are considered during the planning process</td>
<td>3.29</td>
<td>0.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience of digital integrated systems in your organization</td>
<td>3.36</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usefulness of Digital Systems</td>
<td>3.23</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reforms necessary to prepare the organization for the use of Digital Systems</td>
<td>3.26</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factors in the implementation of digital integrated system has been disrupted or prevented</td>
<td>3.20</td>
<td>0.51</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of independent tasks in the planning of digital integrated systems</td>
<td>3.13</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreement with trade</td>
<td>2.97</td>
<td>0.58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reasons to Use Digital Systems and Organization</td>
<td>3.06</td>
<td>0.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The corrective actions in an integrated system using digital</td>
<td>2.63</td>
<td>0.59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In analysis of normality of data regarding considered measures we can say significance levels of Kolmogrov-Smirnov test for study measures are more than significance level of 5% so data is normal. According to the results demonstrated in table 3 in prescriptive analysis of effective factors decision making about not execution of integrated digital system in organization, "the impact of role of independent tasks in planning of using integrated digital system in organization" and "the impact of the extent of agreement with trading methods" in execution or usage of integrated digital system in organization were less than average. In prescriptive analysis of affecting factors which organization considers during process of planning "impact of the role of independent tasks in planning of using integrated digital system", In prescriptive analysis of disruptive and preventing factors of execution of using integrated digital system "impact of profitability of usage of integrated digital system" was more than average.
Table 3. Results of T-test in investing of situation of study measures

<table>
<thead>
<tr>
<th>Indicators</th>
<th>T-test</th>
<th>Degrees of freedom</th>
<th>Significant level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor in the decision not to implement the effective use of digital integrated systems</td>
<td>−1.233</td>
<td>29</td>
<td>0.728</td>
</tr>
<tr>
<td>Reasons to Use Digital Systems in Organization</td>
<td>1.984</td>
<td>64</td>
<td>0.392</td>
</tr>
<tr>
<td>Role of independent tasks in the planning of digital integrated systems</td>
<td>2.148</td>
<td>64</td>
<td>0.036</td>
</tr>
<tr>
<td>The factors that are considered during the planning process.</td>
<td>4.64</td>
<td>64</td>
<td>0.000</td>
</tr>
<tr>
<td>The corrective actions in an integrated system using digital</td>
<td>−4.97</td>
<td>64</td>
<td>0.999</td>
</tr>
<tr>
<td>Reforms necessary to prepare the organization for the use of digital integrated systems</td>
<td>4.067</td>
<td>64</td>
<td>0.000</td>
</tr>
<tr>
<td>Factors in the implementation of digital integrated system has been disrupted or prevented.</td>
<td>3.23</td>
<td>64</td>
<td>0.002</td>
</tr>
<tr>
<td>Usefulness of Digital Systems.</td>
<td>3.97</td>
<td>64</td>
<td>0.000</td>
</tr>
<tr>
<td>Agreement with trade</td>
<td>−0.32</td>
<td>64</td>
<td>0.750</td>
</tr>
</tbody>
</table>

6- Conclusion and research and executive suggestions

Regarding the measures extracted from literature and given that the study purpose is investigating the facts and restrictions of execution of integrated systems in companies and as the Mintzberg (1996) work suggest that all of organization units programs should get applicable and operational and this makes reduction in costs, results of this study show that all of programs should be operational and this can reduce costs, therefore study results and results of Mintzberg work are aligned. Berzel and Dong (2006) in their paper referred to the integrity of the all of information in organization units which requires collaboration, consistency and consistency of matrix teams and this study implied this issue. Sanayei et al. (2012) in their work investigated the necessity of integrity of two enterprise resource planning and E-commerce and classified problems and restrictions of integrity of these systems whis is consistent with findings of this study.

7- Implications

1. One of affecting damages in the path of execution of integrated digital systems in companies is the concern of security threads. Unfortunately the cognitive weakness of applicable layers of company of information security standards in physical and digital environment and mental crises derived from this weakness had a powerful impact on these companies decision making and it is required to company's security team should communicate and make culture of information security standards in different layers of company by utilizing experienced experts.

2. Unfortunately, companies' training system seeks statistical goals and increasing the level of welfare of employees more than company's required mental resources. Therefore, it's necessary that company's trainings are planned and performed in two technical and non-technical levels. In the technical level how to use a training and communicating
technology and in the non-technical level why is that is considered. Regarding the high mental potentials in companies, presenting the applicable standards and not theoretical in training activities can tremendous impact on movability of different layers of company. Regarding the nature of risk acceptance of enterprise resource planning projects and the necessity of increasing the managers' braveness and reduction of natural stresses derived from new thoughts, it is necessary to plan and perform training of risk management, training management, stress management and management of organization conflicts standards in management level.

3. Regarding company's experts thoughts because of high diversity of allocated missions, do not accept concentration on a specific topic, it is necessary to form a committee in parallel with designing and implementing integrated system team towards continuous communication and incremental clarification of operation steps with the information bombardment approach and this team infuse a proper thought in order to support and companion different layer of company.

4. Integrated digital system in companies more than they produce tools, they are propagandist of thought and optimized usage of thoughts. Thus, it is necessary to plan, perform and start organization suggesting system with the aim of collecting opinions, experiences and pure ideas existing in the experienced and matured organisational minds regarding wide range of active expert knowledge in companies.

5. According to results we can say that reinnovation need of business models in intentions towards E-commerce is tangible seriously. Beside this fact, some companies had delay in executing the E-commerce techniques because of defined factors of their industry and lack of pressure from customers and lack of technological resources. Thus this study suggest that organisation should compensate this delay with structural action.

6. Organisation regardless of shortage of customers demand for E-commerce and also lack of customer's readiness in utilizing these kind of techniques invest on E-commerce quickly.

7. Regarding that systematic execution of E-commerce results in strategic benefits and customer patronize regardless of organization trading culture, so, it is suggested that E-commerce should be operational in organisations.

8. According to the study results, it seems that technological restrictions play more crucial role in E-commerce success rather than cultural factors and regarding that existence of information technology resources results in beginning of E-commerce. Thus, this study suggest that Iranian organisation make a full attempt to invest on modern information related to technologies and expertise.

9. Regarding the Iranian organisations' needs to transition procedure of E-commerce systematically and gradually, this study suggests that Iranian organisation take incremental method effectively which acknowledges lack of instant technological and human resources.
8- Suggestions for future research

1. Similar research based on execution of integrated digital systems in Iranian organisations or companies in other provinces of Iran carry out and their results compare to the results of this study.

2. Future research investigate the role of variables such as type and level of management, organisation financial facilities, possibility of hiring expert workforce and etc. in execution of integrated digital systems in organisation (companies).

3. Although, investigated requirements in this study were achieved by scientific follow-ups, but clearly they are not all of possible requirements. It is obvious that in future research different factors can be investigated to serve comprehensiveness of current topic.

4. Also using other tools for collecting information in this field could be effective and can help validity and correction of study findings.

5. According to current study and its results suggestions in below can be useful topics for doing future research:
   - Investigating and identifying the extent of digital gap between different layers of company and project goals;
   - Investigating and identifying digital readiness and integrity of systems of overall units of company;
   - Field investigation of affective mental factors on meeting integration of systems regarding expertise assortment in companies.

References


Gang; i, Qian, Xingsan; Ye, Chunming, (2009), Integration model of Cooperation E-commerce based on Web Services, pp. 1-4.


Kumar, K., & Van Hillegersberg, J, (2000), ERP experiences and evolution. (Technology Information), Communications of the ACM, 43(14), 22.


